IN THE CLAIMS:

Please amend the claims to read as follows. The following is a complete listing of all pending claims, and replaces any prior listing in this application.

1. (currently amended) A method for controlling the scaling of a 3D computer model **comprising one or more 3D objects** in a 3D display system, comprising:

activating a zoom mode in response to user input;

~~calculating~~ **obtaining** a user's viewpoint;

automatically selecting a model zoom point on a three-dimensional object **in the model** as a function of the user's viewpoint and the 3D position**(s)** of ~~the object~~ **one or more objects in the model**;

setting a 3D ~~zoom~~ scaling factor **and scaling the model in response to user input**; **and**

~~implementing a zoom operation on the object in a three-dimensional model space; and~~

automatically moving the model zoom point from its original position towards a system, application, or user defined optimum viewing point according to a defined algorithm ~~operating upon the selected model zoom point and the set scaling factor~~.

2. (original) The method of Claim 1, wherein said 3D display system is stereoscopic.

3. (previously amended) The method of Claim 1, wherein said method is implemented by a user via a mouse or other 2D computer input device.

4. (original) The method of Claim 1, wherein said method is implemented by a user via a sensor which can move in three dimensions.

5. (currently amended) The method of Claim 1, wherein selection of the model zoom point is effected by implementing a defined algorithm operating on the ~~calculated~~ **user's** viewpoint ~~and the set of 3D objects closest to a projection of said viewpoint into a 3D model space~~ **and one of (i) all of the 3D objects and (ii) the center of all visible objects.**

6. (currently amended) The method of Claim 1, wherein selection of the model zoom point is further effected by **one of** a user signaling when a tool moving in the 3D display has its tip at the desired point relative to the model **and a user moving the model relative to the automatically selected model zoom point**.

7. (currently amended) The method of Claim 1, wherein the model zoom point is automatically selected as **one of (i)** the nearest model point visible to the user along the z-axis of the display space and **(ii) a visible point in a crop box on the z-axis of the display space**, wherein the z-axis is set to run through the optimum viewing point.

8. (previously amended) The method of Claim 1, wherein the model zoom point is automatically selected as a point in a crop box on the *z-axis* of the display space, wherein the z-axis is set so as to run through the optimum viewing point.

9. (currently amended) The method of Claim ~~8~~ 7, wherein said model zoom point is one of the nearest such point to the user's viewpoint, the farthest such point from the user's viewpoint, and the centroid of a collection of such points that are in the crop box and on the *z-axis*.

10. (original) The method of Claim 1, wherein the model zoom point is selected as a point in a crop box and in a magnification region.

11. (previously amended) The method of Claim 10, wherein the model zoom point is also a visible model point which is nearest to either the optimum viewing point or a user's viewpoint.

12. (original) The method of Claim 10, wherein the magnification region is made visible to a user as an opening in a contextual structure.

13. (original) The method of Claim 12 wherein said contextual structure is a plane with a hole.

14. (original) The method of Claim 13 wherein the hole's shape is substantially one of a circle, an oval, an ellipse, a square, a rectangle, a triangle, a trapezoid, or any regular polygon.

15. (original) The method of Claim 8, wherein a user causes the motion of the displayed model or models necessary to produce said visible model point that is inside the crop box and on said *z-axis*.

16. (original) The method of Claim 15, wherein the user causes said motion of the displayed model or models by at least one of grasping with a three-dimensional tool and dragging with a mouse.

17. (previously amended) The method of Claim 1 wherein the location of said model zoom point is indicated to a user by the display of a small structure centered thereon.

18. (original) The method of Claim 17, wherein said small structure is a small cross composed of lines and triangles, including or not including as a visible point the model zoom point.

19. (original) The method of Claim 1 wherein the attention of the user is directed to the location of the model zoom point by a larger displayed contextual structure.

20. (original) The method of Claim 19, wherein said contextual structure is a plane with a hole surrounding the model zoom point.

21. (original) The method of Claim 20, wherein said plane is so rendered in a stereoscopic display as to appear to be translucently visible through other structures imaged in the display, regardless of whether said other structures are otherwise shown as opaque or translucent.

22. (original) The method of Claim 1 wherein the zoom operation can be set to be implemented stepwisely or smoothly, as controlled by the user.

23. (previously amended) The method of Claim 22 wherein each of the setting of the zoom scale factor, said stepwise or smooth implementation of the zoom operation, and user definition of an optimum viewing point can be controlled by one or more of the user's voice, a mouse, a 3D tool or other device, a slider, a wheel, and increment/decrement buttons.

24. (previously amended) The method of Claim 1, wherein the zoom operation and the motion of the model zoom point towards the optimum viewing point are implemented substantially simultaneously.

25. (previously amended) The method of Claim 22, wherein the correspondence between the degree of zoom and the motion of the model zoom point is linear, adjusted to display the model without zoom with the model zoom point at its originally selected location and to display the model at a maximum degree of zoom with the model zoom point at the optimum viewing point.

26. (previously amended) The method of Claim 1, further comprising automatically activating a clipping box in the display for values above a defined threshold of a system load estimate.

27-29 canceled.

30. (currently amended) A computer program product comprising:

a computer usable medium having computer readable program code means embodied therein for controlling the scaling of a 3D computer model **comprising one or more**

3D objects in a 3D display system, the computer readable program code means in said computer program product comprising:

computer readable program code means for causing a computer to activate a zoom mode in response to user input;

computer readable program code means for causing a computer to ~~calculate~~ **obtain** a user's viewpoint;

computer readable program code means for causing a computer to automatically select a model zoom point on a three-dimensional object **in the model** as a function of the user's viewpoint and the 3D position**(s)** of ~~the object~~ **one or more objects in the model**;

computer readable program code means for causing a computer to set a 3D zoom scaling factor **and scale the model** in response to user input; and

computer readable program code means for causing a computer to automatically moving the model zoom point from its original position to~~wards~~ a ~~system, application, or user~~ defined optimum viewing point according to a defined algorithm ~~in response to operating upon the selected model zoom point and the set scaling factor~~.

31. (previously amended) The computer program product of claim 30, further containing computer readable program code means for causing a computer to, simultaneously with implementation of the zoom, immediately move the model zoom point to the optimum viewing point.

32. (currently amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to implement a method to

control scaling of a 3D computer model **comprising one or more 3D objects** in a 3D display system, said method comprising:

activating a zoom mode in response to user input;

~~calculating~~ **obtaining** a user's viewpoint;

automatically selecting a model zoom point on a three-dimensional object **in the model** as a function of the user's viewpoint and the 3D position**(s)** of ~~the object~~ **one or more objects in the model**;

setting a 3D zoom scaling factor and scaling the model **in response to user input**; **and**

~~implementing a zoom operation on the object in a three-dimensional model space; and~~

automatically moving the model zoom point from its original position ~~towards a system, application, or user~~ **to a** defined optimum viewing point according to a defined algorithm ~~operating upon the selected model zoom point and the set scaling factor~~.

33. (previously amended) The program storage device of claim 32, wherein said method further comprises immediately moving the model zoom point to the optimum viewing point substantially simultaneously with ~~implementation of the zoom~~ **scaling the model**.

34. (original) The method of claim 12, wherein the contextual structure is displayed in a stereoscopic display system using apparent transferred translucency.

35. (previously presented) The method of claim 1, wherein said defined algorithm specifies a translation of the model space within the display space.

36. (previously amended) The method of claim 1, wherein said defined algorithm is to translate the display of the model space by $(-tx_0, -ty_0, -tz_0)$ as a function of the scaling factor λ wherein:

$t = \frac{\lambda - 1}{\lambda_{max} - 1}$ for scaling factors greater than 1;

$t = \frac{\lambda - 1}{\lambda_{min} - 1}$ for scaling factors less than 1; and

t = 0 for a scaling factor of 1,

and wherein (x_0, y_0, z_0) is the position of the model zoom point prior to zooming.

37. (currently amended) The method of claim 1, wherein the ~~zoom operation~~ **scaling of the model** and corresponding automatic moving of the model zoom point are effected at least one of substantially instantaneously, at a predetermined rate, and at a rate controlled by a user.

38. canceled

39. (previously presented) A method for controlling the scaling of a 3D computer model in a 3D display system, comprising:

activating a zoom mode;

selecting a model zoom point;

setting a zoom scaling factor; and

implementing a zoom operation and automatically moving the model zoom point from its original position according to a defined algorithm in response to the selected model zoom point and the set scaling factor, wherein said defined algorithm is to translate the display of the model space by $(-tx_0, -ty_0, -tz_0)$ as a function of the scaling factor λ, wherein:

$t = \frac{\lambda - 1}{\lambda_{max} - 1}$ for scaling factors greater than 1;

$t = \frac{\lambda - 1}{\lambda_{min} - 1}$ for scaling factors less than 1; and

t = 0 for a scaling factor of 1,

and wherein (x_0, y_0, z_0) is the position of the model zoom point prior to zooming.

40. (previously presented) The method of claim 1, wherein the model zoom point is selected by applying defined rules to visible points of a displayed model that lie in a central viewing area.

41. (previously presented) The method of claim 40, wherein if no said visible points are available, further comprising prompting a user to move the model until such points are available.

42. (currently amended) The method of claim 1, further comprising allowing a user to modify at least one of the model zoom point and the ~~identified~~ **selected three-dimensional object**.

43. (new) A method for controlling the scaling of a 3D computer model comprising one or more 3D objects in a 3D display system, comprising:

activating a zoom mode in response to user input;

obtaining a user's viewpoint;

automatically selecting a model zoom point on a three-dimensional object in the model as a function of the user's viewpoint and the 3D position(s) of one or more objects in the model;

setting a 3D scaling factor and scaling the model in response to user input; and

automatically moving the model zoom point from its original position towards a system, application, or user defined optimum viewing point according to a defined algorithm,

wherein the automatically selected model zoom point is one of: (i) the nearest model point visible to the user along the *z-axis* of the display space; (ii) a visible point in a crop box on the z-axis of the display space, wherein the z-axis is set to run through the optimum viewing point; and (iii) a point in a crop box on the *z-axis* of the display space, wherein the z-axis is set so as to run through the optimum viewing point.

44. (new) A computer program product comprising:

a computer usable medium having computer readable program code means embodied therein for controlling the scaling of a 3D computer model comprising one or more 3D objects in a 3D display system, the computer readable program code means in said computer program product comprising:

computer readable program code means for causing a computer to activate a zoom mode in response to user input;

computer readable program code means for causing a computer to obtain a user's viewpoint;

computer readable program code means for causing a computer to automatically select a model zoom point on a three-dimensional object in the model as a function of the user's viewpoint and the 3D position(s) of one or more objects in the model;

computer readable program code means for causing a computer to set a 3D zoom scaling factor and scale the model in response to user input; and

computer readable program code means for causing a computer to automatically moving the model zoom point from its original position to a defined optimum viewing point according to a defined algorithm.,

wherein the automatically selected model zoom point is one of: (i) the nearest model point visible to the user along the *z-axis* of the display space; (ii) a visible point in a crop box on the z-axis of the display space, wherein the z-axis is set to run through the optimum viewing point; and (iii) a point in a crop box on the *z-axis* of the display space, wherein the z-axis is set so as to run through the optimum viewing point.